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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/901,466   | 07/09/2001  | Stephen J. Lippard   | MTV-033.01          | 5664             |
| 25181  | 7590        | 03/28/2005           | EXAMINER            |                  |
| FOLEY HOAG, LLP<br>PATENT GROUP, WORLD TRADE CENTER WEST<br>155 SEAPORT BLVD<br>BOSTON, MA 02110 |             |                      | CEPERLEY, MARY      |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 1641                |                  |

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/901,466

Applicant(s)

LIPPARD ET AL.

Examiner

Mary (Molly) E. Ceperley

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1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11, 20-30, 48, 50 and 51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 20-30, 48, 50 and 51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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**1)** A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 03, 2004 has been entered.

**2)** The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**3)** The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**4)** Although specific claims may be discussed in the rejections below, these rejections are also applicable to all other claims in which the noted problems/language occur.

Applicants' Remarks filed November 03, 2004 have been considered with regard to the claims as currently amended. Applicants are advised/cautioned that in the interest of advancing prosecution, the variable definitions used in the claims should directly correspond to the definitions as set forth in the specification.

**5)** Claims 1-11, 20-30, 48, 50 and 51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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**a)** For claim 1, there does not appear to be support in the specification for the definition of "Z2" wherein "said phenyl moiety is optionally substituted with...moieties are optionally substituted".

**b)** There is no written description in the specification to support the definition of "Z2" in claim 1 wherein "said phenyl moiety is optionally substituted with one or more E" wherein "E" is other than as defined in the "Z2" definitions at page 31 of the specification.

**c)** There is no written description in the specification to support the "Z2" definition of claim 1 which recites "said hydrogen atoms of said -CH<sub>2</sub>- and -CH= moieties are optionally substituted".

**6)** Claims 1, 5, 6, 20, 24, 25, 27-29 and 48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

**a)** For the compounds of claim 1 wherein "A" contains a "-C(=S)" or "-C(=O)" moiety, it is not clear how all of the moieties "A-V" would be prepared. For example, it is unclear how the "A-V" moieties -C(=S)-phosphine or -C(=O)-sulfamoyl would be prepared. Syntheses for such unconventional linkages are not well known in the art.

**7)** Claims 1-11, 20-30, 48, 50 and 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**a)** The definitions of the terminal group "V" of claim 1 inconsistently includes definitions of groups which are not terminal groups and in which the valency of "V" would be incorrect. See for example, "sulfone" (-SO<sub>2</sub>-), "sulfinyl" (-S-), "carbonyl" (-CO-) and "ether" (-O-).

**b)** The definitions of the terminal group "K" of claim 1 inconsistently includes definitions of groups which are not terminal groups and in which the valency of "K" would be incorrect. See for example, "carbonyl" and "sulfonyl" (recited twice). The same problem exists for "E" defined as "sulfonyl" and "carbonyl".

**c)** The compound of dependent claim 11 is not encompassed by independent claim 1. For claim 11, the closest corresponding definitions of the term "A-V" in claim 1 are "CH<sub>2</sub>-amino" and "CH<sub>2</sub>-heterocycl"; however, neither of these terms includes the definition of "A-V" as it appears in claim 11. This problem also exists for claim 30.

**d)** The compounds of dependent claims 50 and 51 are not encompassed by independent claim 1. There is no definition in claim 1 which corresponds to "A" defined as "CH=".

**e)** It is unclear whether or not the claim 1 term "E is optionally one or more" requires that at least one substituent be present on the aromatic ring.

**f)** In claim 1, it is unclear as to what is meant by the generic terms such as "amino", "amido", "alcohol", "mercaptan", etc. It is unclear, for example, whether the term "amino" has a conventional definition of "NH<sub>2</sub>" or whether a more inclusive definition is intended and supported by the specification. See the inconsistency noted in paragraph **c)** above.

**g)** For claims 50 and 51, the "A-V" definitions are not encompassed by the corresponding definition of independent claims 1 and 20. For example, "A-V" of claim 1 does not include the claim 50 definition "CH=N-R<sup>1</sup>". It is also unclear what is meant by the term "optionally substituted aliphatic" and it is unclear whether the term "optionally substituted" is meant to apply only to "aliphatic" or whether it is also intended to modify the subsequent terms which appear in claims 50 and 51.

**8)** The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**9)** Claims 1-10 and 48 are rejected under 35 U.S.C. 102(a)/(b) as being anticipated by each of Shipchandler et al [Anal. Biochem. (1986)], Kaplan et al [Biochim. et Biophys. Acta (1983)], Werts et al [Angew. Chem. (2000)], AKSO NOBEL [WO 98/39654], Flechtner et al (US 4,912,208), Jackson et al (US 5,667,539), ABBOTT (EP 297,303) or Kirkemo et al (US 4,510,251), all of record.

The claims, as currently amended, read on the prior art for the reasons stated in paragraph **7)** of the July 17, 2003 Office action.

**10)** Claims 20-29 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by each of ABBOTT (EP 297,303), ABBOTT (EP 201,751) or Ghoshal et al (US 5,986,094).

The claims, as currently amended, read on the prior art for the reasons stated in paragraph **8)** of the July 17, 2003 Office action.

**11)** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary (Molly) E. Ceperley whose telephone number is (571) 272-0813. The examiner can normally be reached from 8 a.m. to 4:30 p.m.

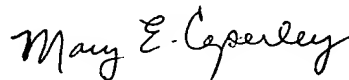
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le, can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from

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either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 15, 2005

A handwritten signature in black ink, reading "Mary E. Ceperley". The signature is written in a cursive, flowing style.

Mary (Molly) E. Ceperley  
Primary Examiner  
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